

BRAZIL

PONTAL DO
PARANAPANEMA

MAY 2018



THE PROJECT

Poor agricultural practices and grazing are responsible for severe deforestation in many places around the world. Deforestation, in turn, leads to wild animals and plants disappearing (biodiversity loss). In Brazil, since 2014, WeForest and its partners are demonstrating that biodiversity friendly land use alternatives are possible. Forest connectivity is promoted through tropical forest restoration within a productive landscape in the Interior Atlantic Forest, a highly threatened and biologically significant ecoregion stretching from northeast Brazil to Paraguay.



SCIENCE-BASED MEASUREMENTS AND VERIFICATION

Forestry survey: conducted according to the Brazilian Environment Secretariat (SMA) protocol for environmental restoration projects, last performed in February 2018

Socio-economic survey: socio-economic surveys to measure progress on livelihood improvement and income increase of engaged families, last performed in December 2017

Carbon measurements: LiDAR measurements to assess biomass growth, last performed in November 2017



LANDSCAPE TRANSFORMATION

Trees funded¹: 1 091 688

Hectares directly restored: 638 ha

Total area positively impacted: 45 000 ha

Methodologies used:

Assisted natural regeneration: a restoration method to enhance the establishment of forests by protecting and nurturing wild seedlings present in the area. It may also include enrichment planting (enhancing the density of desired tree species) and transplanting of saplings.

Framework planting: a technique that involves planting species in ways that promote the natural succession of the forest.



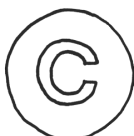
BIODIVERSITY CONSERVATION

A unique seed bank: 82 kg of seeds collected and 100 different native tree species grown in community agroforestry nurseries in order to boost the diversity of trees in restoration sites. Less than one fifth of native tree nurseries in Brazil are able to gather such biodiversity.

Black lion tamarin (*Leontopithecus chrysopygus*) has habitat in the project area. For many years, it was considered extinct in the wild and remains endangered due to forest fragmentation.

Giant anteater (*Myrmecophaga tridactyla*) was spotted roaming our restoration sites. This vulnerable species has lost approximately one third of its populations in the last decade.

The intervention area is shown to have a Shannon biodiversity index of 2.2 and evenness of 0.81, suggesting a **high level of biodiversity** and a **relatively even spread of the species**.



CARBON SINK

The trees planted to date will eventually after 30 years have stored **202 497 tons of CO₂** or an equivalent of **annual carbon footprint of 20 000 Europeans²**.

Our carbon calculation methodology is best in class. Biomass estimates of all planting activities was led by the Laboratory of Quantitative Methods, located at the Forestry Department in ESALQ University of São Paulo. An aerial scan using the LiDAR (Light Detection And Ranging) surveying method was carried out in our restoration sites by a team of graduate students led by Professor Luiz Carlos Estravir Rodriguez. Our final carbon estimates for 2017 are still being triangulated by other methodologies, but the scientific literature shows that this is one of the most precise methods for large scale carbon estimation in forests.



COMMUNITY ENGAGEMENT

478 families benefited since 2015

71 families received training in seedlings production

400 farmers were trained in agroforestry and organic farming

120 families gained additional income from sustainable livelihood alternatives - selling tree saplings from community nurseries, participating in agroforestry schemes and working on forest restoration sites

8 community-based agroforestry nurseries operating for the project and also supplying to the local native seedling market

ACTIVITIES AND RESULTS

RESTORING THE GIANT ANTEATERS HABITAT

Camera traps installed by our partner IPÊ caught a giant anteater (*Myrmecophaga tridactyla*) roaming the ecological corridor planted in 2016. It is estimated that more than one third of giant anteaters' population has been lost in the last decade, placing this species in the "vulnerable" category on the global IUCN Red List and "critically endangered" in the region of Paranapanema. By connecting previously isolated patches of forest, WeForest extends safe habitat for giant anteaters. With environmental education and gradual change of ecological values in the region, the species is on the right track to population regrowth.



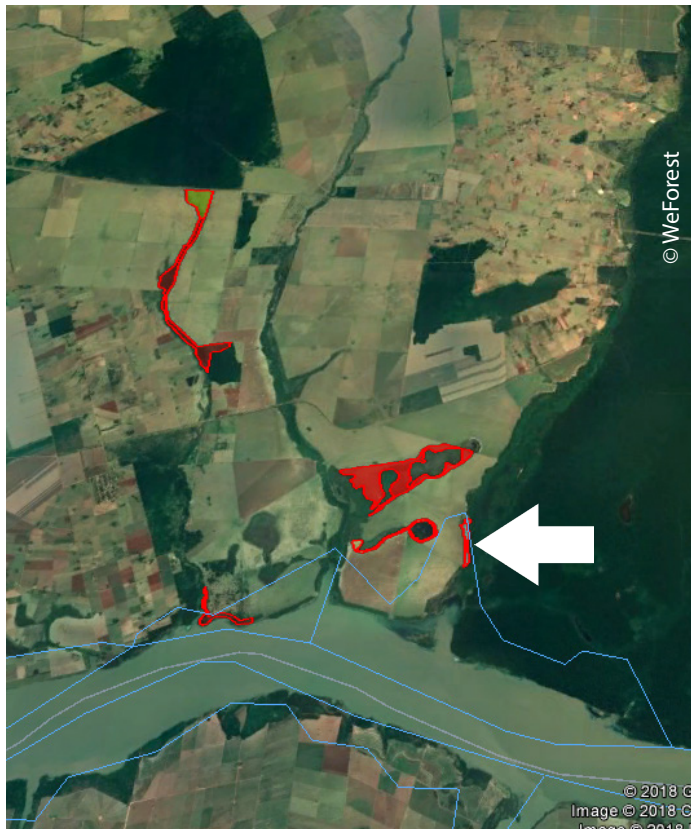
Giant anteater caught on camera in project area.



Giant anteater feeding on ants.



Restoration area, where the Giant anteater was spotted, in February 2016 and November 2017.



Location of the camera trap that took a picture of the Giant anteater, restoration areas in red.

COMMUNITY TREE NURSERIES GROW SEEDLINGS FOR 100 DIFFERENT SPECIES

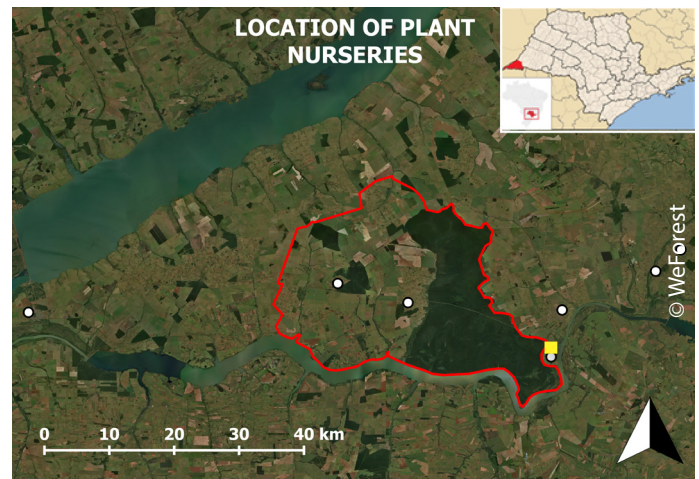
Nurseries are a community activity. While most nurseries are located beyond project boundaries due to the high demand of native seedlings from the project, they are all community owned.

Quality and diversity of seeds matter. 8 nurseries grow 100 different native species, in an effort to boost biodiversity in restoration sites.

Supplying the entire region. In addition to providing supplies for the project, the nurseries are also selling seedlings in the local market.



Mother and daughter working in the Alvorada community nursery (yellow mark on the map).



Map of the 8 community tree nurseries, most of which are outside the project borders (red line).

JOINING THE PACT FOR A BIGGER IMPACT

In April 2018, WeForest joined a coalition of more than 270 companies, public agencies, research centers and NGOs called the Atlantic Forest Restoration Pact. With more than 2 million hectares deforested in the last decade, the Atlantic Forest is highly threatened. The Pact aims to restore 15 million hectares of the Atlantic Forest by 2050.

WeForest's forest landscape restoration activities directly contribute to achieving the goal. WeForest also shares within the Pact its research findings and collaborates with other researchers on analysing data on forest growth to identify areas with high potential for forest landscape restoration.



WeForest's Brazil Representative Ricardo Cesar signs the agreement to join the Pact.

PROJECT CHRONOLOGY

- 2013 IPÊ submitted a project proposal to WeForest
- 2014 Due diligence and approval of partnership, first trees planted
- 2016 Research partnership signed with São Paulo University (LASTROP and EASE), the Federal University of San Carlos (LASPEF), Robin Chazdon from PARTNERS and IPÊ
Forest restoration activities started
WeForest launched a research programme examining the impacts of FLR implementation, FLR success indicators and providing a basis for the development of an international FLR standard with a team of graduate students
- 2017 WeForest organised the International Forest Landscape Restoration Dialogue that led to the emergence of the Forest Landscape Restoration (FLoRES) Task Force
- 2018 WeForest joins the Atlantic Forest Restoration Pact

MEET MARCOS, FARMER WHO PARTICIPATED IN AGROFORESTRY TRAINING



Marcos, a 75 year-old farmer, was recently trained in agroforestry and organic farming. After moving around various parts of Brazil and cultivating land, Marcos settled in Paranapanema when he was already 50, attracted by the promise of land ownership by the government. After six years of waiting, he was finally able to acquire several hectares of land, which he has been actively cultivating since.

Marcos took part in training on agroforestry and organic farming: to grow his income and to boost the productivity of his farm, tree species such as pineapple, orange and jackfruit were planted. The additional forest cover also helped animals return to the area. "Last week my son spotted a giant anteater while herding our cattle and I recently saw some foxes, coatis and agoutis".



Farmer applying agroforestry shows his land to student researchers collaborating with WeForest.



Alvorada community tree nursery in January 2018. Nurseries produce seedlings all year long but most of the production between July and November, before the planting season begins.

FOOTNOTES

- 1 Includes 65 617 trees funded in 2014, 121 484 trees funded in 2015, 597 827 trees funded in 2016, 254 338 trees funded in 2017 and 52 422 trees financed in 2018 (ongoing).
- 2 Assuming the average annual carbon footprint of one European is an equivalent of 10 tons of CO₂.

WeForest is an international non-profit that specializes in mobilizing companies to restore the World's forests and embark their stakeholders into a long-term journey towards environmental sustainability.

In order to achieve the objectives of the Paris Climate Agreement, we need to start decreasing our global emissions by 2020 and achieve carbon neutrality by the second half of this century. While reducing carbon emissions is critical, research suggests that even if carbon dioxide emissions came to a sudden halt, the carbon dioxide already in the Earth's atmosphere could continue to warm our planet for hundreds of years. The challenge is to reduce future carbon emissions and actively remove the excess carbon from our atmosphere.

Forests are known as the best technology for that: they are an amazing carbon sink.

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THANK YOU